Leadership in Embedded Security

Breakout 3 - Smart Homes/IoT

Key Challenges in the Application Area

1. Programming and maintenance by homeowners with diverse skill levels.
2. Balancing security against the demands of integration and interoperability.
3. Enabling user understanding and control of information flows from the home.
4. Addressing complexity that invites side channels and malware.

CCC
Computing Community Consortium
Catalyst

Key Trends in the Application Area

1. Post-WIMP interfaces. (Windows Icons Menus Pointers)
2. Increased multi-vendor interoperation.
3. Increased credential sharing, exposure, and remote use over the Internet.

CCC
Computing Community Consortium
Catalyst

Potential Novel Solutions in the Application Area

1. Develop smart home platforms that support and promote secure design and integration.
2. Develop Privacy Enhancing Technologies (PETs) suited to home IoT use. Design a privacy dashboard.
3. Model and secure the full lifecycle of IoT devices.

CCC
Computing Community Consortium
Catalyst